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DEPARTMENT OF COMMERCE

UNITED STATES BUREAU OF MINES
SCOTT TURNER, DIRECTOR

INFORMATION CIRCULAR

LIST OF PERMISSIBLE MINE EQUIPMENT

BY

L. C. ILSLEY

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DEPARTMENT OF COMMERCE - BUREAU OF MINES

LIST OF PERMISSIBLE MINE EQUIPMENT[1]

By L. C. Ilsley[2]

A complete list of permissible mine equipment, tested prior to January 1, 1930, was published in Bureau of Mines Information Circular 6230[3]. The present list[4] includes practically all the electric air compressors, coal drills, mining machines, loading machines, conveyors, mine pumps, room hoists, mine telephones, rock-dusting machines, switches, electric cap lamps, flame safety lamps, electric hand and trip lamps, flash lamps, methane indicators and detectors, blasting units, storage battery locomotives, tandem locomotives, power trucks and concrete mixers, tested and approved by the bureau up to and including July 1, 1930.

The system under which these devices were tested permits the manufacturer, after his equipment has passed certain tests prescribed by the Bureau of Mines, to mark his equipment with a seal showing that it has been approved by the bureau. These tests are designed to insure the equipment having the minimum requirements for safety in use. The only object of the bureau in making such tests and publishing lists of permissible equipment is to safeguard the lives of workers and to help lessen the hazards of mining.

PERMISSIBLE MINING MACHINES, COAL DRILLS, ETC.

Approved Under Schedules 2, 2A, 2B, and 2C

Air Compressors

1. Type WK-26 compressor; 30-hp. motor, 250-500 volts, D. C. Approvals 117 and 117A, issued to Sullivan Machinery Co., March 12, 1925.

2. Type WK-39 self-propelled compressor; 30-hp. motor, 250-500 volts, D. C. Approvals 120 and 120A, issued to Sullivan Machinery Co., July 28, 1925.

3. Type CP-26G, CP-26D, and CP-26H compressors; 25-hp. motor, 250-500 volts, D. C. Approvals 128 and 128A, issued to General Electric Co., March 21, 1927, and July 16, 1926, respectively.

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1 The Bureau of Mines will welcome reprinting of this paper, provided the following footnote acknowledgment is used: "Reprinted from U. S. Bureau of Mines Information Circular 6347."

2 Electrical Engineer, U. S. Bureau of Mines, Pittsburgh Experiment Station.

3 List of Permissible Mining Equipment, Information Circular 6230, Bureau of Mines, February, 1930.

4 A few equipments which may now be considered obsolete and therefore not obtainable are not included in this list.

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4. Type 20 compressor; 15-hp. motor, 250-500 volts, D. C. Approvals 159 and 159A, issued to Ingersoll-Rand Co., Sept. 4, 1928.

5. Type WK-22 compressor; 30-hp. motor, 250-500 volts, D. C. Approvals 160 and 160A, issued to Sullivan Machinery Co., Sept. 10, 1928.

6. Type WK-22 compressor; 20-hp. motor, 230 volts, D. C. Approval 189 issued t the Sullivan Machinery Co., April 22, 1930.

Loading Machines and Conveyors

1. Type 43-A shortwaloader; 50-hp. motor, 250-500 volts D. C. Approvals 122 a 122A, issued to The Jeffrey Mfg. Co., Jan. 8, 1926.

2. Type 44-B conveyor-loader; 50-hp. motor, 250-500 volts, D. C. Approvals 12 and 123A, issued to the Jeffrey Mfg. Co., Jan. 15, 1926.

3. Belt-type conveyor; 5-hp. motor, 250 volts, D. C. Approval 126, issued to Bird Coal Co., June 25, 1926.

4. Shovel-type loading machine; 30-hp. motor, 250-500 volts, D. C. Approvals 1 and 127A, issued to Myers-Whaley Co., July 16, 1926, and Sept. 23, 1927, respectively.

5. Chain-type conveyor; 5-hp. motor, 250 volts, D. C. Approval 129, issued to Bird Coal Co., July 21, 1926.

6. Type 5-BU loading machine; 25-hp. motor, 230-500 volts, D. C. Approvals 13 and 132A, issued to Joy Mfg. Co., December 29, 1926, and March 22, 1927, respectively.

7. Type 49-A chain-type conveyor; 3-hp. motor, 250-500 volts, D. C. Approvals 133 and 133A, issued to The Jeffrey Mfg. Co., Feb. 10, 1927.

8. Conveyor-type loader; 30-hp. motor, 250-500 volts, D. C. Approvals 135 and 135A, issued to the Sullivan Machinery Co., May 11, 1927.

9. Type 136-EC entryloader; 35-hp. motor, 210-500 volts, D. C. Approvals 138 138A, issued to the Goodman Mfg. Co., Aug. 5, 1927.

10. Belt-type conveyor; 1-hp. motor, 220 volts, D. C. Approval 139, issued to Lorain Steel Co., Aug. 19, 1927.

11. Type A.F.-10 by 8 shaker conveyor; 15-hp. motor, 250-500 volts, D. C. Approvals 149 and 149A, issued to C. H. McCullough Engineering Co., March 2 1928.

12. Type 48-E power shovel; 15-hp. motor, 210 volts, D. C. Approval 150, issued to Goodman Mfg. Co., May 11, 1928.

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13. Chain-type conveyor; 5-hp. motor, 250 volts, D. C. Approval 151, issued to South Fork Foundry & Machine Co., May 19, 1928.

14. Conveyor-type face loader; 25-hp. motor, 250 volts, D. C. Approval 155, issued to Bethlehem Steel Co., August 2, 1928.

15. Shaker-type car filler; 22-hp. motor, 250 volts, D. C. Approval 156, issued to Bethlehem Steel Co., August 2, 1928.

16. Pit car loader; (turntable type) 1-hp. motor, 250-500 volts, D. C. Approvals 166 and 166A, issued to Duncan Foundry and Machine Works, (Inc.), March 13, and July 11, 1929, respectively.

17. Brownie pit car loader; 1 1/2-hp. motor, 250-500 volts D. C. Approvals 167 and 167A, issued to the Brown-Fayro Co., March 27, 1929.

18. Pit car loader; 1-hp. motor, 230-500 volts, D. C. Approvals 168 and 168A issued to the Northern Conveyor and Manufacturing Co., April 5, and Sept. 27, 1929, respectively.

19. Conveyor Sales Co. Shaker conveyor; 10-hp. motor, 250 volts, D. C. Approval 171 issued to the Goodman Manufacturing Co., April 17, 1929.

20. Pit car loader; 1 1/2-hp. motor, 250-500 volts, D. C. Approvals 173 and 173A issued to the Fairfield Engineering Co., April 30, 1929.

21. Pit car loader; 1-hp. motor, 250 volts, D. C. Approval 174 issued to Bertrand P. Tracy Co., May 22, 1929.

22. Pit car loader; 1-hp. motor, 250-500 volts, D. C. Approvals 175 and 175A issued to the Chicago Automatic Conveyor Co., July 26 and June 24, 1929, respectively.

23. Pit car loader; 2-hp. motor, 230 volts, D. C. Approval 178, issued to the Northern Conveyor and Manufacturing Co., Oct. 5, 1929.

24. Pit car loader; 1 1/2-hp. motor, 250-500 volts, D. C. Approvals 179 and 179A, issued to the Mancha Storage Battery Locomotive Co., Nov. 26 and Oct. 19, 1929, respectively.

25. Type L-2 loading machine; 13 motors aggregating 117-hp., 250 volts, D. C. Approval 182, issued to the Oldroyd Machine Co., December 9, 1929.

26. Type 148-E power shovel; 22-hp. motor, 220 volts, D. C. Approval 186 issued to Goodman Manufacturing Co., March 15, 1930.

27. Pit car loader; 1-hp. motor, 250 volts, D. C. Approval 187 issued to the Bertrand P. Tracy Co., March 19, 1930.

28. Type 44-C loading machine; two 7 1/2-hp. motors, 250-500 volts, D. C. Approvals 194 and 194A, issued to The Jeffrey Manufacturing Co., June 6, 1930.

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Coal Drills

1. Type 2-BF drill; 1-hp. motor, 80, 110, and 250 volts, D. C. Approvals 109 and 109A, issued to Chicago Pneumatic Tool Co., Sept. 19, 1922.

2. Type CD drill; 3/4-hp. motor, 110-230 volts, D. C. Approvals 110 and 110A, issued to Marbin-Hardsocg Co., Sept. 16, 1922.

3. Type A-5 drill; 3-hp. motor, 110-250 volts, D. C. Approvals 119 and 119A, issued to The Jeffrey Mfg. Co., April 15, 1925.

4. Type 56-A drilling machine; 2-type A-5 Jeffrey drills on truck, propelled by 13-hp. motor, 250-500 volts, D. C. Approvals 147 and 147A, issued to The Jeffrey Mfg. Co., February 8, 1929.

5. Model A drill; 1 3/4 hp. motor, 250 volts, D. C. Approval 154 issued to Ohio Brass Co., Aug. 1, 1928.

6. Class CD-4 and CD-5 self-propelled coal drilling machine; 5-hp. motor, 250-500 volts, D. C. Approvals 176 and 176A issued to Sullivan Machinery Co., September 9, 1929.

7. Class CD-4 and CD-5 self-propelled coal drilling machine; 5-hp. motor, 250-500 volts, D. C. Approvals 177 and 177A issued to Sullivan Machinery Co., September 13, 1929.

8. Type AE-430 Siemens-Schuckert drill; 1/2-hp. motor, 250 volts, D. C. Approval 184 issued to the Colonial Supply Co., February 7, 1930.

Mining Machines

1. Type CE-7 shortwall mining machine; 30-hp. motor, 250-500 volts, D. C. Approvals 100 and 100A, issued to Sullivan Machinery Co., Sept. 30, and Oct. 20, 1914, respectively.

2. Types 12-CC and 12-EC shortwall mining machines, 35-hp. motor, 210-500 volts, D. C. Approvals 101 and 101A, issued to Goodman Mfg. Co., May 20, 1916.

3. Type 35-B shortwall mining machine, 35-hp. motor, 250-500 volts, D. C. Approvals 103 and 103A, issued to The Jeffrey Mfg. Co., Nov. 2, 1917.

4. Type CE-7 shortwall mining machine, 30-hp. motor, 220-440 volts, A. C. Approvals 104 and 104A, issued to Sullivan Machinery Co., January 16, 1919.

5. Types 12-CJ and 12-EJ shortwall mining machines; 50-hp. motor, 210-500 volts, D. C. Approvals 105 and 105A, issued to Goodman Mfg. Co., June 21, 1920.

6. Types 112-CC and 112-EC shortwall mining machines; 50-hp. motor, 210-500 volts, D. C. Approvals 106 and 106A, issued to Goodman Mfg. Co., Feb. 9, 1922.

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7. Types 12-CC and 12-EC shortwall mining machines; 35-hp. motor, 210-500 volts, D. C. Approvals 107 and 107A, issued to Goodman Mfg. Co., Feb. 9, 1922.

8. Types 112-CJ and 112-EJ shortwall mining machines; 35-hp. motor, 210-500 volts, D. C. Approvals 108 and 108A, issued to Goodman Mfg. Co., Feb. 9, 1922.

9. Type 35-BB shortwall mining machine; 50-hp. motor, 250-500 volts, D. C. Approvals 111 and 111A, issued to Jeffrey Mfg. Co., Oct. 16, 1922.

10. Type 29-C arcwall mining machine; 50-hp. motor, 250-500 volts, D. C. Approvals 112 and 112A, issued to Jeffrey Mfg. Co., March 13, 1924.

11. Types 212-EJ and 212-CJ shortwall mining machines; 50-hp. motor, 210-500 volts, D. C. Approvals 113 and 113A, issued to Goodman Mfg. Co., Nov. 4, 1924.

12. Types 112-CK3 and 112-EK3 mining machines; 35-hp. motor, 220-440 volts, A. C. Approvals 114 and 114A, issued to Goodman Mfg. Co., Feb. 7, 1925.

13. Types 112-CL3 and 112-EL3 shortwall mining machines; 50-hp. motor, 220-440 volts, A. C. Approvals 115 and 115A, issued to Goodman Mfg. Co., Feb. 7, 1925.

14. Type 124-EJ slabbing machine; 50-hp. motor, 210-500 volts, D. C. Approvals 118 and 118A, issued to Goodman Mfg. Co., March 12, 1925.

15. Type 30-A shearing-drilling machine; 50-hp. motor, 250-500 volts, D. C. Approvals 125 and 125A, issued to The Jeffrey Mfg. Co., April 26, 1926.

16. Type CLU cutting-shearing machine; 50-hp. motor, 250-500 volts, D. C. Approvals 134 and 134A, issued to the Sullivan Machinery Co., March 18, 1927.

17. Type CLE longwall mining machine; 30-hp. motor, 250-500 volts, D. C. Approvals 136 and 136A, issued to the Sullivan Machinery Co., May 28, 1927.

18. Type S-3 shearing machine; 25-hp. motor, 500 volts, D. C. Approval 148A, issued to Joy Mfg. Co., Feb. 8, 1928.

19. Type B-2 mining machine; 50-hp. motor 250-500 volts, D. C. Approvals 152 and 152A, issued to Oldroyd Machine Co., June 15, 1928.

20. Type 35-BB shortwall mining machine; 50-hp. motor, 220-440 volts, A. C. Approvals 153 and 153A, issued to The Jeffrey Mfg. Co., Aug. 1, 1928.

21. Type 224-EJ slabbing machine; 50-hp. motor, 250-500 volts, D. C. Approvals 172 and 172A issued to the Goodman Manufacturing Co., April 29, 1929.

22. Type CLE-2 longwall mining machine; 30-hp. motor, 220-440 volts, A. C. Approval 181 and 181A issued to the Sullivan Machinery Co., Dec. 2, 1929 and January 6, 1930, respectively.

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23. Type 24-B longwall mining machine; 35-hp. motor, 220-440 volts, A. C. Approvals 185 and 185A, issued to The Jeffrey Manufacturing Co., February 24, 1930.

24. Type CLU cutting-shearing machine; 50-hp. motor, 220-440 volts, A. C. Approvals 188 and 188A, issued to the Sullivan Machinery Co., April 15, 1930.

25. Type CR-3 shortwall mining machine; 30-hp. motor, 220-440 volts, A. C. Approvals 191 and 191A issued to the Sullivan Machinery Co., May 21, 1930.

26. Type CR-3 shortwall mining machine; 30-hp. motor, 250-500 volts, D. C. Approvals 192 and 192A, issued to the Sullivan Machinery Co., June 3, 1930.

27. Type 35L shortwall mining machine; 50-hp. motor, 250-500 volts, D. C. Approvals 193 and 193A, issued to The Jeffrey Manufacturing Co., June 3, 1930.

Room Hoists

1. Oaks safety room hoist; 5-hp. motor, 250-500 volts, D. C. Approvals 116 and 116A, issued to South Fork Foundry and Machine Co., Feb. 13, 1925.

2. Brownie room hoist; 5-hp. motor, 250-500 volts, D. C. Approvals 162 and 162A, issued to Brown-Fayro Co., Nov. 30, 1928.

3. Type HDE-4 room hoist; 10-hp. motor, 250-500 volts, D. C. Approvals 164 and 164A, issued to Sullivan Machinery Co., Jan. 4, 1929.

4. Type HE-5 room hoist; 10-hp. motor, 250-500 volts, D. C. Approvals 165 and 165A, issued to Sullivan Machinery Co., Jan. 4, 1929.

5. Brownie model HG room hoist; 5-hp. motor, 250 volts, D. C. Approval 169, issued to the Brown-Fayro Co., April 5, 1929.

6. Room hoist; 5-hp. motor, 230 volts, D. C. Approval 190 issued to the Flood City Brass and Electric Co., April 29, 1930.

Mine Pumps

1. Fairmont No. I mine pump; 5-hp. motor, 115, 230, and 500 volts, D. C. Approvals 140 and 140A, issued to Westinghouse Electric & Mfg. Co., Nov. 1, 1927.

2. Deming "Oil Rite" mine pump; 5-hp. motor, 115, 230, and 500 volts, D. C. Approvals 141 and 141A, issued to Westinghouse Electric & Mfg. Co., Nov. 1, 1927.

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3. Scranton 5 by 6 mine pump; 5-hp. motor, 115, 230, and 500 volts, D. C. Approvals 143 and 143A, issued to Westinghouse Electric & Mfg. Co., Nov. 1, 1927.

4. Weinman "Self-Oiler" mine pump; 5-hp. motor, 115, 230, and 500 volts, D. C. Approvals 144 and 144A, issued to Westinghouse Electric & Mfg. Co., Nov. 1, 1927.

5. Austin 5 by 6 mine pump; 5-hp. motor, 115, 230, and 500 volts, D. C. Approvals 145 and 145A, issued to Westinghouse Electric & Mfg. Co., Nov. 18, 1927.

6. Austin 4 by 5 mine pump; 3-hp. motor, 230 volts, D. C. Approval 157, issued to General Electric Co., Aug. 23, 1928.

7. Austin 5 by 6 mine pump; 5-hp. motor, 230-500 volts, D. C. Approvals 158 and 158A, issued to General Electric Co., Aug. 27, 1928.

8. Deming "Oil-Rite" mine pump; 3-hp. motor, 230 volts, D. C. Approval 161, issued to General Electric Co., Nov. 9, 1928.

9. Deming "Oil-Rite" mine pump; 5-hp. motor, 230 volts, D. C. Approval 163, issued to General Electric Co., Dec. 7, 1928.

10. Scranton 5 by 6 mine pump; 5-hp. motor, 250-500 volts, D. C. Approvals 170 and 170A, issued to the Goodman Mfg. Co., April 9, 1929.

Concrete Mixers

1. Austin-type concrete mixer; 5-hp. motor, 115, 230, and 500 volts, D. C. Approvals 142 and 142A, issued to Westinghouse Electric & Mfg. Co., Nov. 1, 1927.

Rock-Dusting Machine

1. M.S.A. Co. rock-dusting machine; 5-hp. motor, 230 volts, D. C. Approval 130, issued to Mine Safety Appliances Co., November 5, 1926.

2. Diamond Machine Co. rock-dusting machine; 15-hp. motor, 230 volts, D. C. Approval 131, issued to Diamond Machine Co., December 28, 1926.

3. M.S.A. Co. rock-dusting machine; 15-hp. motor, 230 volts, D. C. Approval 137, issued to Mine Safety Appliances Co., July 2, 1927.

4. Type 125 rock-dusting machine; 12-hp. motor, 250-500 volts, D. C. Approvals 146 and 146A, issued to Mine Safety Appliances Co., Jan. 20, 1928, and April 3, 1928, respectively.

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5. Type H rock-dusting machine; 20-hp. motor, 230 volts, D. C. Approval 180, issued to The American Mine Door Co., Oct. 30, 1929.

6. Diamond Machine Co. rock-dusting machine; 12-hp. motor, 95 volts, D. C. Approval 183, issued to Diamond Machine Co., February 4, 1930.

PERMISSIBLE ELECTRIC SWITCHES AND JUNCTION BOXES

Approved Under Schedule 4A

1. Enclosed 2-pole fused switch-200 amperes, 250 volts; 100 amperes, 500 volts, D. C. Approvals 400 and 400A, issued to The Ohio Brass Co., June 16, 1928, and Aug. 5, 1925, respectively.

2. Enclosed 2-pole fused switch - 250 amperes, 250 volts; 150 amperes, 500 volts, D. C. Approvals 401 and 401A, issued to the Sullivan Machinery Co., May 11, 1927.

3. Enclosed 3-pole fused switch - 250 amperes, 220 volts; 150 amperes, 440 volts, A. C. Approvals 402 and 402A, issued to the Sullivan Machinery Co., May 11, 1927.

PERMISSIBLE ELECTRIC CAP LAMPS FOR MINERS

Approved Under Schedules 6A & 6B

1. Edison Model "C" lamp. Approval 10, issued to Edison Storage Battery Co., Feb. 24, 1915.

2. Wico lamp, Approval 14, issued to Witherbee Igniter Co., June 10, 1916.

3. Wheat lamp. Approval 17, issued to Koehler Mfg. Co., Inc., Sept. 23, 1919.

4. Edison Model "E" lamp. Approval 18, issued to Edison Storage Battery Co., March 28, 1923.

5. RM-6 f. d. Ceag lamp. Approval 19, issued to Concordia Electric Co., Aug. 2, 1923.

6. Super-wheat lamp. Approval 20, issued to Koehler Mfg. Co., (Inc.), April 27, 1926.

7. RM-7 Ceag lamp. Approval 21, issued to Concordia Electric Co., June 18, 1926.

8. Edison Model G lamp. Approval 22, issued to Edison Storage Battery Co., Nov. 16, 1927.

9. RM-8 Ceag lamp, Approval 23, issued to Concordia Electric Co., April 3, 1928.

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PERMISSIBLE FLAME SAFETY LAMPS

Approved under Schedules 7, 7A, and 7B

1. Koehler steel frame lamp, flat wick. Approval 201, issued to Koehler Mfg. Co., (Inc.), Aug. 21, 1915.

2. Koehler Steel frame lamp, round wick. Approval 201A, issued to Koehler Mfg. Co., (Inc.), July 29, 1918.

3. Koehler Aluminum frame lamp, flat wick. Approval 203, issued to Koehler Mfg. Co., (Inc.), Feb. 7, 1919.

4. Koehler Aluminum frame lamp, round wick. Approval 203A, issued to Koehler Mfg. Co., (Inc.), Feb. 7, 1919.

5. Wolf brass frame lamp, round wick. Approval 204, issued to Wolf Safety Lamp Co. of America, (Inc.), July 18, 1921.

6. Wolf Aluminum frame lamp, round wick. Approval 205, issued to Wolf Safety Lamp Co. of America, (Inc.), April 24, 1924.

7. Wolf Aluminum frame lamp, flat wick. Approval 206, issued to Wolf Safety Lamp Co. of America, (Inc.), April 24, 1924.

8. Wolf brass frame lamp, flat wick. Approval 208, issued to Wolf Safety Lamp Co. of America, (Inc.), March 14, 1927.

PERMISSIBLE ELECTRIC HAND AND TRIP LAMPS

Approved under Schedule 10A

1. Type RME-RMCT Ceag hand and trip lamp. Approval 1000, issued to Concordia Electric Co., May 25, 1922.

2. Model "E" inspection lamp. Approval 1001, issued to Mine Safety Appliances Co., July 28, 1925.

3. Model "E" signal lamp. Approval 1002, issued to Mine Safety Appliances Co., December 8, 1927.

4. Model "E" hand lamp. Approval 1003, issued to Mine Safety Appliances Co., Jan. 12, 1928.

5. Super-Wheat hand lamp. Approval 1004, issued to Koehler Mfg. Co., (Inc.), July 19, 1928.

6. Super-Wheat Stevedore Lamp. Approval 1005, issued to Koehler Mfg. Co., (Inc.), August 3, 1928.

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PERMISSIBLE ELECTRIC FLASH LAMPS

Approved Under Schedule 11

1. Eveready, safety type, flash lamp. Approval 601, issued to National Carbon Co., (Inc.), Oct. 22, 1924.

PERMISSIBLE METHANE INDICATORS AND DETECTORS

Approved Under Schedules 7B and 8A

Methane Indicating Detectors

1. Burrell indicator. Approval 800, issued to Mine Safety Appliances Co., March 10, 1922.

2. "U.C.C." indicator. Approval 802, issued to Oxweld Acetylene Co., Nov. 27, 1928.

Methane Detectors

1. Wolf flame-type detector. Approval 207, issued to Wolf Safety Lamp Co. of America, (Inc.), Nov. 21, 1924.

2. Martienssen electric-type detector. Approval 801, issued to the Gesellschaft fuer nautische Instrumente, Kiel, Germany, January 9, 1928.

PERMISSIBLE MINE TELEPHONES

Approved Under Schedule 9A

1. Western Electric mine-type telephone. Approval 901, issued to the Western Electric Co., (Inc.), July 16, 1927.

PERMISSIBLE SINGLE-SHOT BLASTING UNITS

Approved Under Schedule 12

1. M.S.A. battery-type blaster. (Edison Model "C" mine lamp battery with blasting attachment.) Approval 1200, issued to Mine Safety Appliances Co., May 24, 1924.

2. Davis No. 0 magneto-type blaster. Approval 1201, issued to Davis Instrument Mfg. Co., (Inc.), March 15, 1921.

3. Du Pont Pocket magneto-type blaster. Approval 1202, issued to E. I. Du Pont de Nemours & Co., Aug. 15, 1924.

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4. Davis No. 00 magneto-type blaster. Approval 1203, issued to Davis Instrument Mfg. Co. (Inc.), Oct. 17, 1924.

5. Concordia battery-type blaster. (Concordia type RM-6 f.d. mine lamp battery with blasting attachment.) Approval 1204, issued to the Concordia Electric Co., March 2, 1925.

6. M.S.A. battery-type blaster. (Edison Model "E" mine lamp battery with blasting attachment.) Approval 1205, issued to the Mine Safety Appliances Co., April 28, 1925.

7. Eveready dry cell-type blaster. Approval 1206, issued to National Carbon Co., (Inc.), Aug. 20, 1925.

8. Davis No. 000 magneto-type blaster. Approval 1207, issued to Davis Instrument Manufacturing Co., (Inc.), Nov. 18, 1926.

PERMISSIBLE STORAGE BATTERY LOCOMOTIVES AND POWER TRUCKS

Approved Under Schedules 15 and 2C

Gathering Locomotives

1. Whitcomb, E.S.B. flame-proof locomotive. Approval 1500, issued to Geo. D. Whitcomb Co., March 14, 1921.

2. Jeffrey type B.D.M. class 40 locomotive. Approval 1501, issued to The Jeffrey Manufacturing Co., October 11, 1921.

3. Mancha flame-proof "Hercules" locomotive. Approval 1502, issued to the Mancha Storage Battery Locomotive Co., Nov. 13, 1922.

4. Ironton type W.O.G. locomotive. Approval 1503, issued to Ironton Engine Co., March 24, 1923.

5. Mancha Hercules A and AX locomotives. Approval 1505, issued to the Mancha Storage Battery Locomotive Co., April 5, 1924.

6. Jeffrey type B.D.M. Class 25 locomotive. Approval 1507, reissued to the Jeffrey Mfg. Co., Aug. 20, 1925.

7. Goodman Type 10-30 locomotive. Approval 1508, issued to the Goodman Mfg. Co., March 21, 1925.

8. Goodman Type 8-30 locomotive. Approval 1509, issued to the Goodman Mfg. Co., Sept. 25, 1925.

9. Mancha Standard A. AN, and AX locomotives. Approval 1511, issued to Mancha Storage Battery Locomotive Co., Nov. 10, 1925.

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10. Westinghouse-Baldwin locomotive. Approval 1512, issued to Westinghouse Electric & Mfg. Co., Nov. 11, 1925.

11. General Electric type LSBE-2C6-C9 locomotive. Approval 1513, issued to General Electric Co., February 25, 1926.

12. Jeffrey Type B.D.M. 25 Form H. Locomotive. Approval 1516, issued to The Jeffrey Mfg. Co., December 28, 1926.

13. Atlas Type B locomotive. Approval 1517, issued to Atlas Car & Mfg. Co., Feb. 10, 1927.

14. Mancha 2-motor locomotive; Approval 1520, issued to the Mancha Storage Battery Locomotive Co., May 27, 1929.

15. Jeffrey type DM-15 locomotive. Approval 1521, issued to The Jeffrey Manufacturing Co., June 13, 1930.

Main-Line Haulage Locomotive

1. Jeffrey Type B.D.M. Class 30 main-line haulage locomotive. Approval 1510, issued to Jeffrey Mfg. Co., Oct. 12, 1925.

Power Trucks

1. Mancha power tank. Approval 1506, issued to Mancha Storage Battery Locomotive Co., May 5, 1924.

2. Mancha power tank and gathering locomotive. Approval 1505A, issued to Mancha Storage Battery Locomotive Co., June 21, 1926.

3. Jeffrey power truck and main-line haulage locomotive. Approval 1510-C, issued to The Jeffrey Manufacturing Co., Dec. 31, 1926.

4. Mancha nonpropelled power truck, Approval 1514, issued to Mancha Storage Battery Locomotive Co., December 18, 1926.

5. Jeffrey power truck. Approval 1515, issued to The Jeffrey Mfg. Co., December 28, 1926.

6. Westinghouse power truck. Approval 1512-C, issued to Westinghouse Electric and Mfg. Co., Sept. 13, 1928.

7. General Electric type LSBE-2C6-C12 power truck and gathering locomotive. Approval 1519-C, issued to the General Electric Co., April 6, 1929.

Tandem Locomotives

1. Jeffrey tandem locomotive. Approval 1518, issued to the Jeffrey Mfg. Co., Nov. 21, 1927.

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